TRIDONIC.ATCO

User manual

PCA EXCEL one4all with corridorFUNCTION
PCA T5 ECO lp with corridorFUNCTION
TE one4all with corridorFUNCTION

Contents

1 Introduction

The corridorFUNCTION is an extra function of the dimmable series of PCA ECO and PCA EXCEL ballasts as well as TE one4all. If the ballast is connected to conventional relay presence detectors (or even automatic stairwell switches) the light value is raised for example to 100 % when a 230 V mains voltage signal is applied to control input D1 and D2, and automatically reduced to the set light level when the presence detector switches off.

This arrangement provides energy savings of up to 70 % in 24 hour applications where light is needed round the clock for safety reasons, for example in stairwells and corridors in public buildings, and in large apartment complexes, car parks, pedestrian underpasses and underground railway stations.

The corridorFUNCTION also offers added value in standard presence detector applications. The corridorFUNCTION does not abruptly switch off the lighting but dims it to a preset level and then switches it off after a further minute if necessary. This provides much greater security in private stairwells, corridors, car parks, warehouses and industrial environments.

Switching is power-less so there is virtually no limit on the number of luminaires that can be switched.

2 Installation

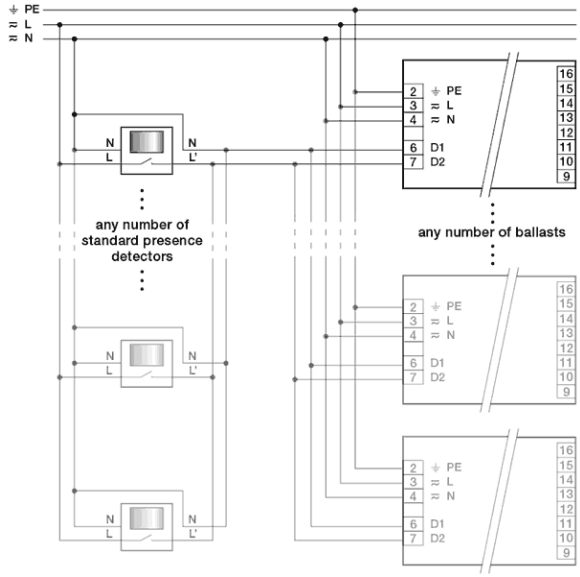
Five-pole luminaire wiring is used, as in dimming (phase, neutral, earth, two-pole control line).

Conventional relay presence detectors are recommended. Electronic presence detectors (Triac) are not suitable because of their basic load requirements.

Important:

For large installations several phases can be used for ECG supply (L1, L2, L3). In this case, it is important to make sure that the control line (L') from the presence detector is connected to D2. All presence detectors must be connected to the same line.

PCA ECO/PCA EXCEL one4all



TE one4all

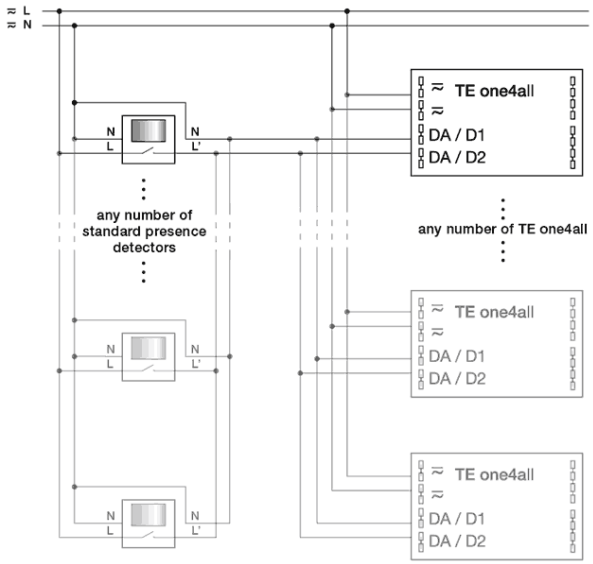


Fig. 1: corridorFUNCTION wiring diagram

3 Commissioning

Ballasts with integrated corridorFUNCTION activate the corridor mode automatically if the mains signal is applied at the digital interface for longer than 5 minutes.
This greatly simplifies installation. You simply need to connect the corridor application in accordance with the installation instructions and stay in the room for more than 5 minutes or set the delay time of the presence detector to more than 5 minutes. You only need to do this once during set-up.

Important:
If a switchDIM application has been put in corridor mode by mistake (for example because of a short-circuited pushbutton or because a switch has been installed instead of a pushbutton) the corridor mode can be deactivated by pressing the pushbutton five times within 3 seconds once the fault has been corrected.

If a corridor application has been set up with the “automatic detection procedure” all the ballasts will operate with the standard corridorFUNCTION profile. (Fig. 2)

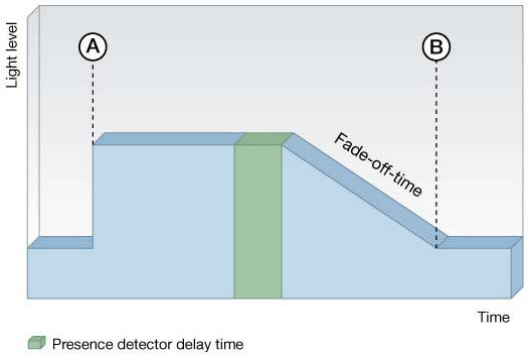


Fig. 2: Standard profile 1 “Never OFF” (A...100 %, B...10 %, Fade time 32 s, never OFF)

4 corridorFUNCTION product overview

TE one4all

Low-voltage halogen lamps	
86456435	TE 0105 one4all cc
86457873	TE 0105 one4all sc
86457874	TE 0150 one4all sc
86457968	TE-0105 one4all 80%

PCA ECO

T5 high output	
22089458	PCA 1/80 T5 ECO lp
22089461	PCA 1/54 T5 ECO lp
22089483	PCA 1/49 T5 ECO lp
22089506	PCA 1/39 T5 ECO lp
22089521	PCA 1/24 T5 ECO lp
22089477	PCA 2/54 T5 ECO lp
22089499	PCA 2/49 T5 ECO lp
22089515	PCA 2/39 T5 ECO lp
22089537	PCA 2/24 T5 ECO lp

T5 high efficiency	
22089370	PCA 1/35 T5 ECO lp
22089392	PCA 1/28 T5 ECO lp
22089414	PCA 1/21 T5 ECO lp
22089436	PCA 1/14 T5 ECO lp
22089386	PCA 2/35 T5 ECO lp
22089405	PCA 2/28 T5 ECO lp
22089420	PCA 2/21 T5 ECO lp
22089442	PCA 2/14 T5 ECO lp

PCA EXCEL one4all

T5 high output	
22088533	PCA 1/80 T5 EXCEL one4all lp
22088549	PCA 1/54 T5 EXCEL one4all lp
22088568	PCA 1/49 T5 EXCEL one4all lp
22088580	PCA 1/39 T5 EXCEL one4all lp
22088607	PCA 1/24 T5 EXCEL one4all lp
22088555	PCA 2/54 T5 EXCEL one4all lp
22088574	PCA 2/49 T5 EXCEL one4all lp
22088596	PCA 2/39 T5 EXCEL one4all lp
22088616	PCA 2/24 T5 EXCEL one4all lp

T5 high efficiency	
22088454	PCA 1/35 T5 EXCEL one4all lp
22088473	PCA 1/28 T5 EXCEL one4all lp
22088495	PCA 1/21 T5 EXCEL one4all lp
22088511	PCA 1/14 T5 EXCEL one4all lp
22088467	PCA 2/35 T5 EXCEL one4all lp
22088489	PCA 2/28 T5 EXCEL one4all lp
22088502	PCA 2/21 T5 EXCEL one4all lp
22088527	PCA 2/14 T5 EXCEL one4all lp
22086658	PCA 3/14 T5 EXCEL one4all
22086677	PCA 4/14 T5 EXCEL one4all

T8	
22085286	PCA 1/58 EXCEL one4all
22085264	PCA 1/36 EXCEL one4all
22085245	PCA 1/18 EXCEL one4all
22084608	PCA 2/58 EXCEL one4all
22085270	PCA 2/36 EXCEL one4all
22085251	PCA 2/18 EXCEL one4all
22086715	PCA 3/18 EXCEL one4all
22086699	PCA 4/18 EXCEL one4all

TCD / TCT	
22086941	PCA 1/57 TCT EXCEL one4all
22088663	PCA 1/42 TCT EXCEL one4all
22088622	PCA 1/32 TCT EXCEL one4all
22084686	PCA 1/26 TCD EXCEL one4all
22084709	PCA 1/18 TCD EXCEL one4all
22084724	PCA 1/11/13 TCD EXCEL one4all
22088679	PCA 2/42 TCT EXCEL one4all
22088638	PCA 2/32 TCT EXCEL one4all
22084670	PCA 2/26 TCD EXCEL one4all
22084692	PCA 2/18 TCD EXCEL one4all
22084718	PCA 2/11/13 TCD EXCEL one4all

T5c / TC-DD	
22086904	PCA 1/40 T5c EXCEL one4all
22086881	PCA 1/22 T5c EXCEL one4all
22086929	PCA 1/55 T5c EXCEL one4all
22086636	PCA 1/55 TC-DD EXCEL one4all

TCL	
22089004	PCA 1/80 TCL EXCEL one4all
22085387	PCA 1/55 TCL EXCEL one4all
22085365	PCA 1/40 TCL EXCEL one4all
22085346	PCA 1/36 TCL EXCEL one4all
22085393	PCA 2/55 TCL EXCEL one4all
22085371	PCA 2/40 TCL EXCEL one4all
22085352	PCA 2/36 TCL EXCEL one4all
22086869	PCA 2/24 TCL EXCEL one4all
22086840	PCA 2/18 TCL EXCEL one4all

5 Annexes

A. Differences of the corridorFUNCTION in PCA EXCEL one4all and PCA T5 ECO lp

The corridorFUNCTION is implemented in slightly different ways in the PCA EXCEL one4all and in the PCA T5 ECO lp. PCA EXCEL one4all offers additional functionality and flexibility.

Same behaviour by PCA EXCEL one4all and PCA T5 ECO lp
PCA EXCEL one4all and PCA T5 ECO lp start the corridorFUNCTION mode automatically by simply detecting the control signal (in this case mains voltage) at the control input. This means that a mains signal that exists for more than 5 minutes at the interface automatically activates the corridor mode. In this case, standard profile 1 (never OFF*) is used. With the aid of the corridorFUNCTION plug a second profile (switch OFF**) can be selected.

* See Fig. 2 on page 3

** See Annex B

Additional individual settings on PCA EXCEL one4all
On all PCA EXCEL one4all ballasts the corridorFUNCTION can be individually configured with free software (corridorFUNCTION CONFIGURATOR, pcaCONFIGURATOR or the configTOOL). For details see annex C.

B. Activating the second profile with the corridorFUNCTION plug

By simply inserting the corridorFUNCTION plug* in the SMART interface it is possible to select profile 2 “Switch off after 1 minute delay”. From this time onwards the ballast dims until the absence light value is reached and remains at this value for a further minute, then switches off unless presence is detected in the meantime.

* 86458380 corridorFUNCTION plug for T8, TCL and for ballasts for compact lamps.
86458381 corridorFUNCTION plug lp for T5 ballasts in low profile casings (21x30 mm).

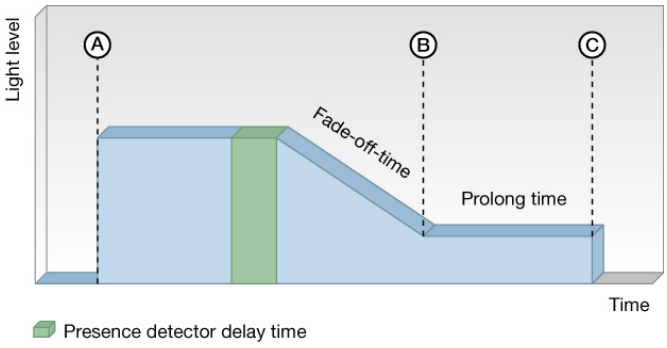


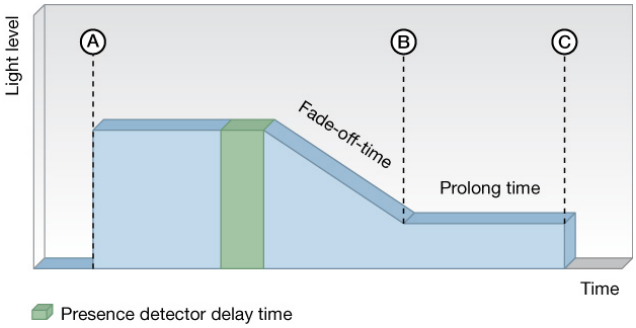
Fig. 3: Standard profile 2 (A...100%, B...10%, fade time...32s, C...switch off after 1 minute delay)

Fig. 3a: Place corridorFUNCTION plug in SMART channel and profile 2 will be used.

C. Individual programming of the corridorFUNCTION with PCA EXCEL one4all and TE one4all

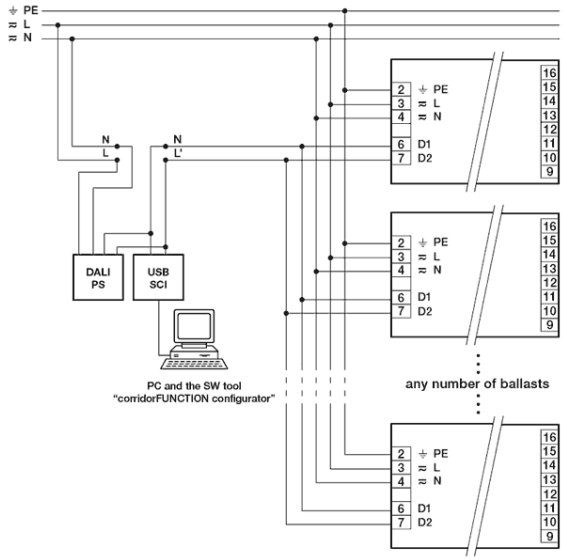
The following parameters can be individually set on PCA EXCEL one4all as well as TE one4all ballasts with the corridorFUNCTION CONFIGURATOR, the pcaCONFIGURATOR or the configTOOL.
Download: www.tridonicatco.com

- Presence light value (A): factory setting 100 %, range min./max.
- Presence light value (B): factory setting 10 %, range min./max.
- Fade time between presence and absence light values: factory setting 32 s, range 0.05–90 s.
- Switch off delay time (C): factory setting 1 min., range 0–42 min.
- The “Switch off after 1 min. delay” mode can be activated.



To activate the corridor mode or to change the individual settings using a software tool a DALI USB and a DALI PS (or DALI PS1) must be temporarily connected. They can be removed once programming has been completed.

PCA ECO/PCA EXCEL one4all



TE one4all

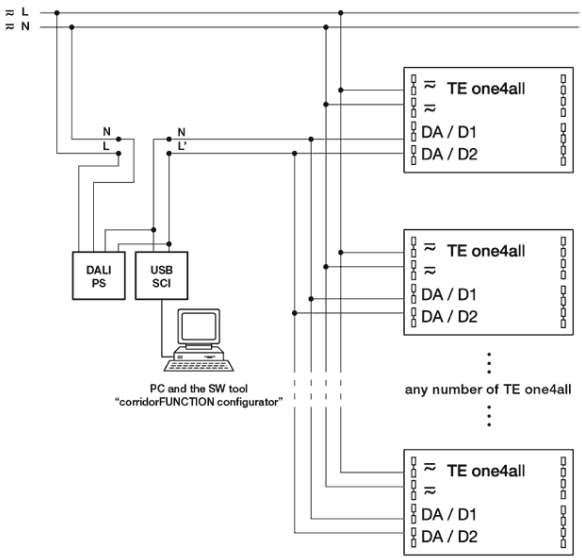
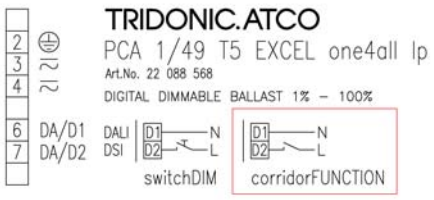


Bild 4: corridorFUNCTION wiring for programming via a PC and the corridorFUNCTION-CONFIGURATOR (download: www.tridonicatco.com)

D. Identification of corridorFUNCTION ballasts

Ballasts equipped with the corridorFUNCTION display the wiring diagram for the corridorFUNCTION on the label next to the wiring diagram for switchDIM.



E. Accessories

Order no.	Accessory	Description
86458380	corridorFUNCTION plug	SMART plug for the second profile mode (switch off after a 1 min. delay on the absence value) for ballasts in 28 mm high or compact housings.
86458381	corridorFUNCTION plug lp	SMART plug for the second profile mode (switch off after a 1 min. delay on the absence value) for ballasts in 21 mm high low-profile housings.
24034323	DALI PS 1	DALI power supply. This is needed in conjunction with the DALI USB computer interface for programming PCA EXCEL one4all ballasts.
24138923	DALI USB	Computer interface (USB on DALI). This is needed in conjunction with the DALI PS (DALI power supply) for programming PCA EXCEL one4all ballasts.
Free download	corridorFUNCTION CONFIGURATOR	Simple software for application-specific parametrisation of corridorFUNCTION applications. No special knowledge is needed to use the software tool.
Free download	pcaCONFIGURATOR	Simple software for parametrising PCA EXCEL one4all lp ballasts. In addition to the corridorFUNCTION functions other useful functions can be set, such as DALI MEMORY, DC-LEVEL, BACKWARDS COMPATIBILITY, etc.
Free download	configTOOL	Provisional free download version: Comprehensive software for starting up and documenting DALI systems. Application-specific programming of the corridorFUNCTION, all PCA T5 EXCEL one4all lp functions and some controllers such as the DALI Touchpanel, LED converters, etc.